

**IN THE CLAIMS:**

On page 7, line 1, cancel "Patent claims" and substitute -I CLAIM AS MY INVENTION:-- therefor.

Claims 1-4 have been cancelled.

5           1-4. (Cancelled)

Add the following new claims.

5. (New)   A method for correcting pixels of an x-ray image data set, comprising the steps of:

acquiring an x-ray exposure of an examination subject with an x-ray  
10           apparatus using a storage film as an x-ray detector, said storage  
              film comprising a storage luminophore layer having a sensitivity  
              that changes dependent on an accumulated x-ray dose to which  
              said storage luminophore is exposed;

reading out said storage film with a readout device after acquiring x-ray  
15           exposure;

from the readout of said storage film, generating an x-ray image data  
set corresponding to said x-ray exposure, said x-ray image data  
set comprising a plurality of data set pixels respectively  
corresponding to pixels of said x-ray exposure; and

20           correcting each of said data set pixels with a correction value  
              associated with the pixel corresponding thereto in the x-ray  
              exposure, by adapting each correction value dependent on an  
              accumulated x-ray dose to which a portion of the storage film  
              containing the pixel corresponding to the data set pixel was  
25           exposed, before acquiring said exposure of the subject.

6. (New) A method as claimed in 5, comprising correcting pixels  $RB_{i,j}^m$  of the m-th x-ray image data set according to the following:

$$B_{i,j}^m = a * RB_{i,j}^m / EB_{i,j}^m,$$

5

wherein

a is a first scaling factor,

$RB_{i,j}^m$  is the signal of the pixel i, j of the m-th x-ray image data set,

10  $EB_{i,j}^m$  is the correction value for the pixel i, j of the m-th x-ray image data set  
and

$B_{i,j}^m$  is the signal of the pixel i, j of the m-th corrected x-ray image data set.

7. (New) A method as claimed in claim 6, comprising determining  
15 the accumulated x-ray dose  $D_{i,j}^m$  for a region of the storage film that is  
associated with the pixel i, j of the x-ray image data set according to the  
following relation for the m-th x-ray image data set:

$$D_{i,j}^m = \sum_{n=1}^{m-1} b * B_{i,j}^n,$$

20

wherein b is a second scaling factor.

8. (New) A method as claimed in claim 7, comprising determining the correction value  $EB_{i,j}^m$  for the pixel i, j of the m-th x-ray image data set according to the following relation:

5  $EB_{i,j}^m = EB_{i,j}^0 - s * \left( \sum_{n=1}^{m-1} b * B_{i,j}^n \right),$

wherein s is a constant and  $EB_{i,j}^0$  is the correction value that is associated with the storage film without applied x-ray dose.